

REMARKS

Claims 1-6 are pending. Claims 1-6 stand rejected. Claim 1 is an independent claim.

The Abstract of the Disclosure stand objected for exceeding 150 words. In response, applicant submits a new abstract less than 150 words. Applicant submits that the new abstract add no new matter. Accordingly, applicant respectfully requests removal of the objection.

Claim 1 stand objected for containing a typographical error. In response, applicant has amended claim 1 to correct the error. The support for the amendment can be found at page 11, line 7-10. Applicant respectfully requests removal of the rejection in view of such correction.

Claim 1 stands rejected under 35 U.S.C. '103(a) as allegedly being obvious over wideband optical fiber amplifier disclosed in the Figure 1 of the present application ("FIGURE 1 AMPLIFIER") in view of Hwang *et al.* (U.S. 6,535,324) ("Hawng").

Claim 1, as written, recites, *inter alia*, "a first amplification section for **amplifying and outputting the wideband optical signals including the C-band optical signals and the L-band optical signals...**"

Applicant respectfully submits that nowhere in FIGURE 1 AMPLIFIER is there a disclosure of an amplification section that amplifies the combined C-band and L-band optical signals. Instead, FIGURE 1 AMPLIFIER discloses a pair of amplification sections where each section amplifies one of either C-band signals or L-band signals (page 2, line 21 – page 3, line 3). In fact, applicant respectfully submits that both amplification sections of FIGURE 1 AMPLIFIER are **incapable** of amplifying the combined C-band and L-band optical signals, as the C/L splitter, disposed at the input stage of the amplifier, separates C-band and L-band signals before the combined signals are amplified (Id.). Accordingly, FIGURE 1 AMPLIFIER, when considered as a whole, fails to disclose an amplification section that amplifies or that is capable

of amplifying the wideband optical signals including the C-band optical signals and the L-band optical signals, as does the present first amplification section recited in claim 1.

Hwang, as read by applicant, fails to disclose an amplification section. As such, Hwang also fails to show a first amplification section that amplifies the wideband optical signals including the C-band optical signals and the L-band optical signals, as recited in claim 1.

Moreover, claim 1 recites, *inter alia*, “a C/L splitter for **separating the wideband optical signals amplified by the first amplification section...**” As shown in Figure 2, the C/L splitter (213) splits the combined C-band and L-band optical signals that have been amplified previously by the first amplification section (page 9, line 20 – page 10, line 9).

FIGURE 1 AMPLIFIER, however, discloses one C/L splitter disposed at input or initial stage of the amplifier. Moreover, FIGURE 1 AMPLIFIER discloses that the signals travel unidirectionally, from the C/L splitter to each amplification section (See Figure 1). Accordingly, the signals input to the FIGURE 1 AMPLIFIER are separated by the only C/L splitter prior to being amplified by either amplification section (page 2, line 21 – page 3, line 3). As such, the C/L splitter of FIGURE 1 AMPLIFIER, when considered with other elements, is **incapable** of separating the wideband optical signal that has been amplified previously by either amplification section. Accordingly, applicant respectfully submits that FIGURE 1 AMPLIFIER fails to show the “C/L splitter for separating the wideband optical signals amplified by the first amplification section,” as recited in claim 1.

Applicant respectfully submits that nowhere in Hwang is there a disclosure of a C/L splitter. As such, Hwang also fails to show the “C/L splitter for separating the wideband optical signals amplified by the first amplification section,” as recited in claim 1.

Despite that the above features are not shown in FIGURE 1 AMPLIFIER and Hwang, alone or in combination, the Office Action rejects claim 1 indicating that the above features are merely functional and do not patentably distinguish claim 1 from two references. In particular, the Office Action indicates that “an apparatus may be recited either structurally or functionally, [however,] claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function alone. Since the structural limitations have been met by the [Figure 1 Amplifier and Hwang], the Examiner has reason to believe that the function limitation can be performed by the prior art structure” (present Office Action, page 513-19).

The United States Court of Appeals for the Federal Circuit and its predecessor, the Court of Customs and Patent Appeals, however, has expressly approved using functional features to distinguish the claimed invention from prior art (*In re Srieber*, 128 F.3d 1473, 1478, 44 USPQ2d 1429 (Fed. Cir. 1997) (indicating that a “**patent applicant is free to recite features of an apparatus either structurally or functionally**”) (emphasis added); *In re Swinehart*, 439 F.2d 210, 212, 169 USPQ 226, (CCPA 1971) (holding that there is nothing intrinsically wrong with defining something by what it does rather than what it is in drafting patent claim)). Only when

“the Patent Office has a reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, [the Patent Office] possess the authority to require the applicant to prove that the subject matter shown in to be in the prior art does not possess the characteristic relied on.”

(*In re Swinehart*, 439 F.2d at 21, 169 USPQ at 228). As long as the applicant demonstrate that functional features of the claimed invention are not inherent to the reference, the features patentably distinguish the claimed invention from prior art (See *In re Srieber*, 128 F.3d at 1478-1479).

As noted above, FIGURE 1 AMPLIFIER and Hwang, alone or in combination, are **incapable** of (1) amplifying the combined C-band and L-band signals and (2) separating C-band

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and L-band signals that are previously amplified by the first amplification section, as does the present amplifier of claim 1. Accordingly, the above features are not characteristics inherent to the references, alone or in combination. Claim 1 containing the above features, therefore, is unobvious over FIGURE 1 AMPLIFIER and Hwang, alone or in combination. Applicant respectfully requests reconsideration and removal of the present rejection on claim 1.


Other claims in this application are each dependent on the independent claim 1 and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

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Should the Examiner deem that there are any issues which may be best resolved by telephone, please contact Applicant's undersigned representative at the number listed below.

Respectfully submitted,

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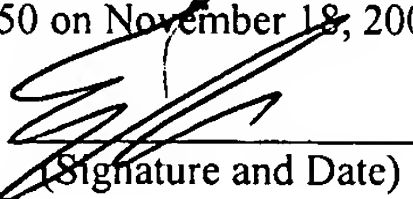
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